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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,739	12/21/2000	Bo Hakansson	1274	5587

7590 01/13/2003

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EXAMINER

CHANEY, CAROL DIANE

ART UNIT PAPER NUMBER

1745

DATE MAILED: 01/13/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/741,739

Applicant(s)

HAKANSSON ET AL.

Examiner

Carol Chaney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 20-38 is/are pending in the application.
- 4a) Of the above claim(s) 20-28 and 38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 29-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1. 6) ☐ Other:

***Election/Restrictions***

Applicant's election of Group II, claims 29-36 in Paper No. 6, filed 29 October, 2002 is acknowledged. In the interest of expediting prosecution of the application, the inventions of Groups II and III have been examined together. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement restricting the inventions of Groups I, II, and IV outlined in the restriction requirement mailed 27 September 2002, the election of the Groups II and III together has been treated as an election without traverse (MPEP § 818.03(a)). Claims 29-37 have been examined.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 35 and 36 recites the limitation "the third layer" in the second line of each claim. There is insufficient antecedent basis for this limitation in the claim.

Both claim 35 and 36 are dependent upon claim 30, which recites a first layer, a second layer and a mesh. It is unclear if the mesh in claim 30 is intended to be a "third layer" or if claims 35 and 36 are intended to be dependant upon claim 31, which recites a separate "third layer".

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 29-32 are rejected under 35 U.S.C. 102(b) based upon a public use or sale of the invention. Applicants' claims are anticipated by the four shelf, chrome plated steel mesh shelving advertised at [www.stacksandstacks.com](http://www.stacksandstacks.com) sku 9966. The first metallic layer is the plated chrome layer of the bottom shelf. The second metallic layer is the top shelf. The mesh is the second shelf from the top. The third layer is the second shelf from the bottom, and the fourth layer is the chrome plating on the third layer. The chrome plating of the shelving unit is considered "sensitive to hydrogen embrittlement". Because the copyright for the cited URL address is dated 1998, this item is assumed to have been on sale since 1998, more than a year before applicants' filing of the instant application.

Claims 29-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Pimlott et al., US Patent 4,668,371, which includes US Patent 4,444,632 incorporated by reference.

Pimlott et al. disclose a construction for an electrochemical cell. The construction includes a first metallic layer (36), an anode which is preferably a metal,

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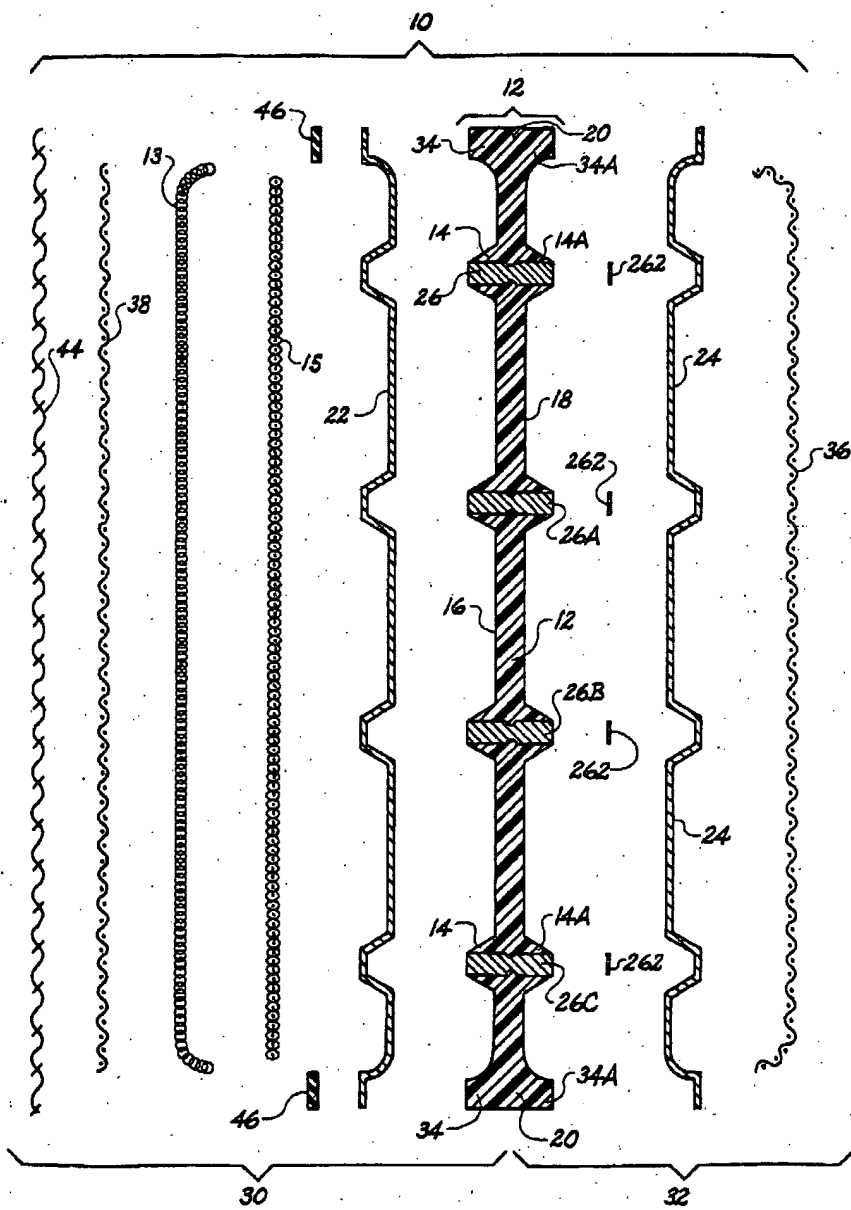
such as tantalum, tungsten, columbium, zirconium, molybdenum, titanium with Ti being most preferred. (Column 6, lines 39-46.) A second layer cathode (38), which is made of a metal such as iron, nickel, lead, molybdenum, or cobalt. (Column 6, lines 54-66.) Reference numeral 13 is a layer described as a "mattress" and is a mesh for venting gases. (Column 7, lines 13-20 and US Patent 4,444,632 column 4, lines 19-27 and 66-68.) The third layer disclosed by Pimlott et al. is the catholyte cover (22) which is preferably made from iron, steel, stainless steel, nickel, lead, molybdenum or cobalt. (Column 5, line 56-column 6, line 2.) With regards to claim 36, the third layer (reference 22) is relatively non-porous and will have a lower hydrogen permeability than the second layer (reference 38) which is intended to be permeable to hydrogen. (Column 7, lines 24-32.) A fourth layer is the anolyte cover, reference numeral 24.

With regards to claim 33, a preferred embodiment of mattress 13 includes intermeshed wound metallic spirals forming channels. The spirals have diameters 5 to 10 times the diameter of the wires used. (See US Patent 4,444,632 column 4, lines 53-62.) Preferred diameters for the wires are between 0.05 and 0.5 millimeters. (US Patent 4,444,632 column 12, lines 38-40.) Therefore, diameters of the channels in the mattress used in the Pimlott et al. invention are in the range of about 0.25 mm and 5 mm or 250 microns to 5,000 microns.

## U.S. Patent

**May 26, 1987.**

**4,668,371**



**FIG. 1**

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

DeNora, US Patent 4,340,452 discloses electrolysis cells including metal mesh.

Oda et al., US Patent 4,444,641 discloses current collectors.

Pimlott et al., US Patent 5,599,430 A discloses electrolysis cells with mattresses.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol Chaney whose telephone number is (703) 305-3777. The examiner can normally be reached on Mon - Fri 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 703-308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Carol Chaney  
Primary Examiner  
Art Unit 1745